

# Deploying CS-Studio at DLS

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Applications



# Topics

- Why CS-Studio?
- Work done
- Decisions
- Work to do

# Why CS-Studio?

- DLS has many EDM screens
- EDM is approaching end of life
- **DLS has two other Eclipse RCP projects**

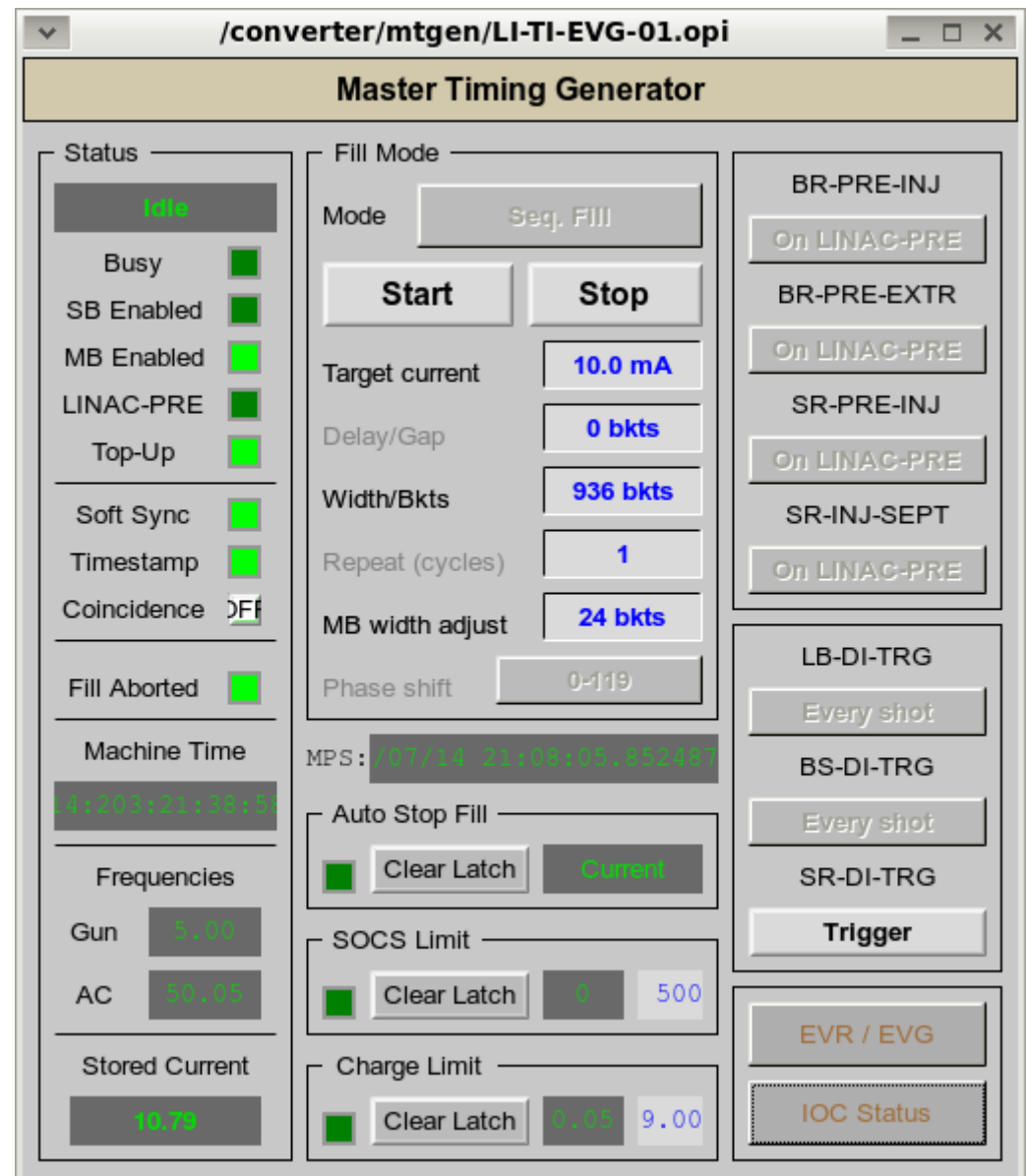


# Why CS-Studio?

- Adopting CS-Studio would allow:
  - integration of different products
  - sharing of expertise
  - sharing of infrastructure
- BUT converting from EDM to CS-Studio is not trivial...
- We need to transfer with minimal disruption

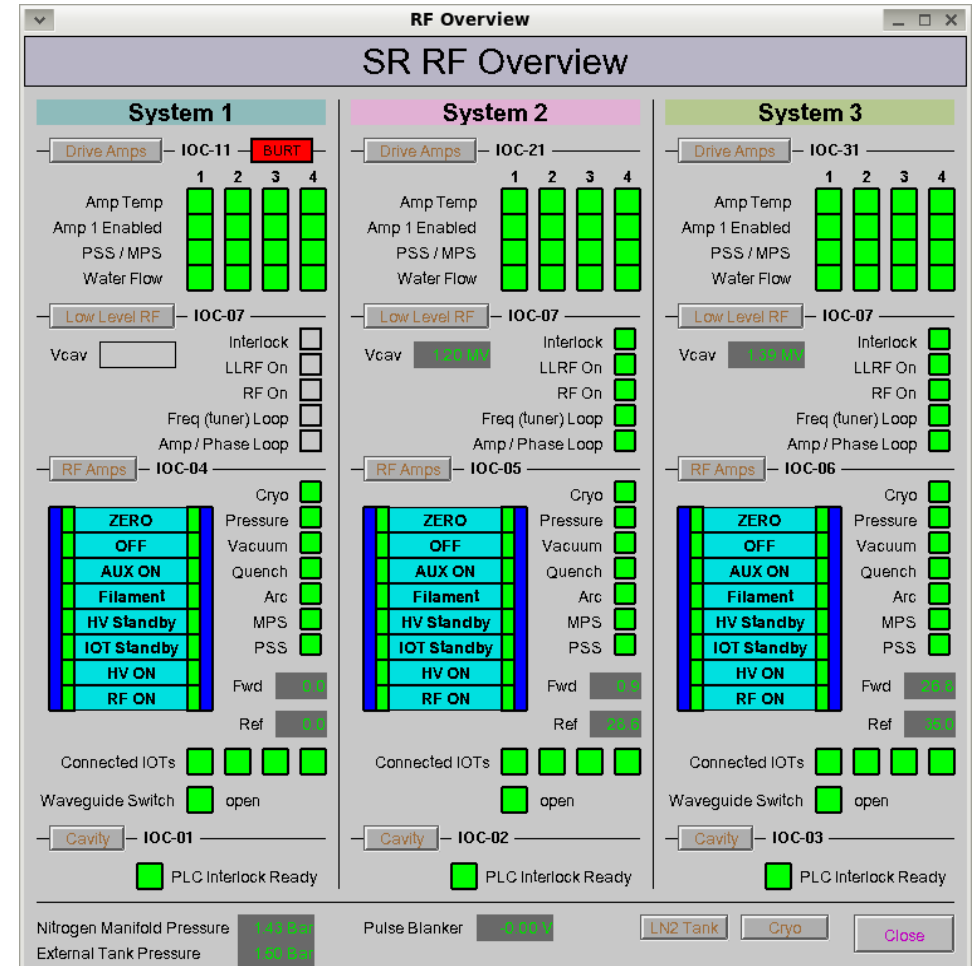
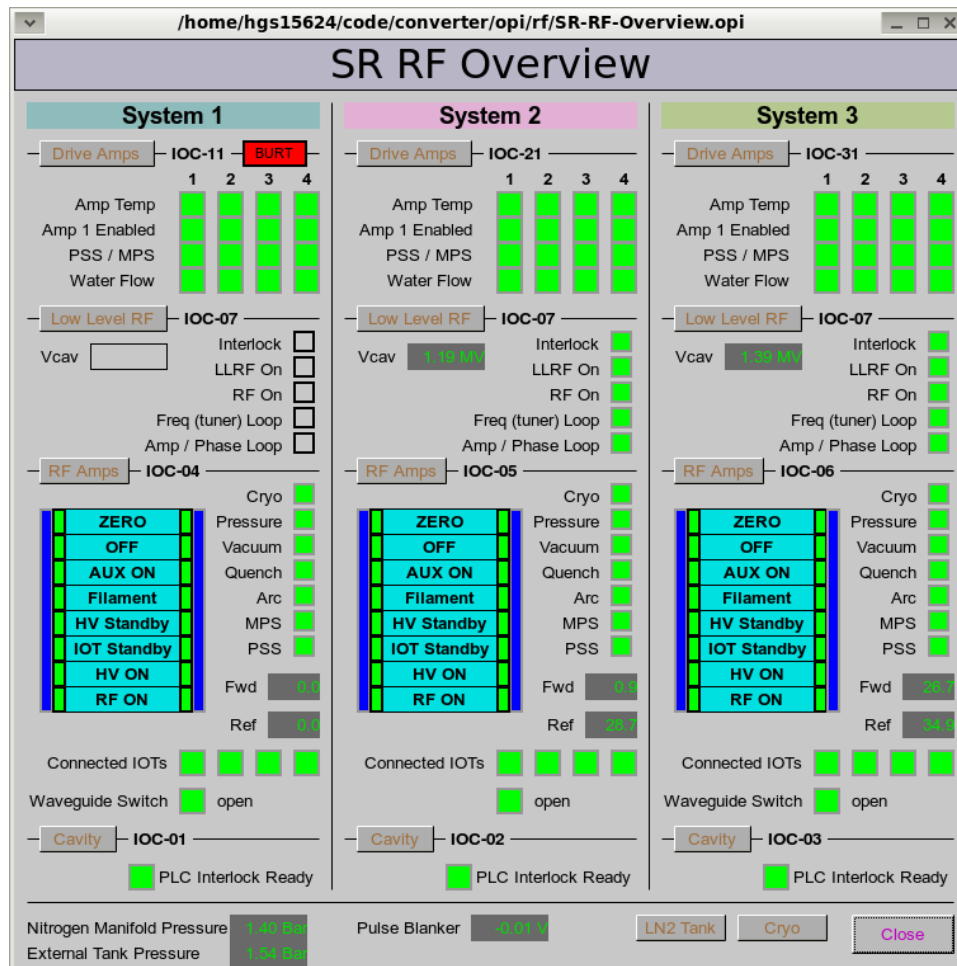
# Work done

- EDM-style windows in CS-Studio
- ...coming soon?



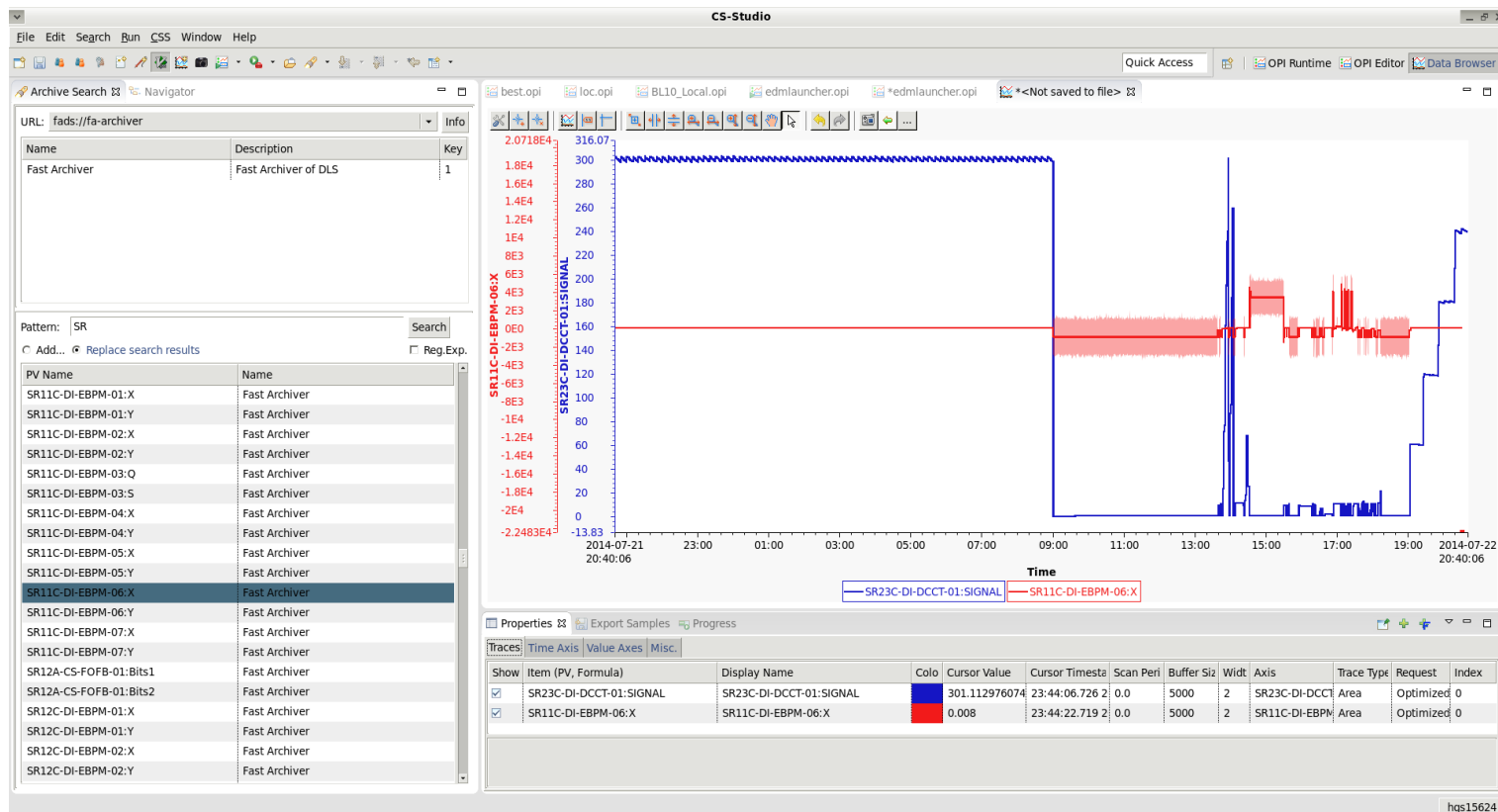
# Work done

- EDM conversion accuracy



# Work done

- Integration of EPICS archiver and custom fast archiver



# Work done

- New-style beamline controls screens

The screenshot displays the CS-Studio interface for beamline control, running on i14-ws002.diamond.ac.uk. The interface is divided into several panels:

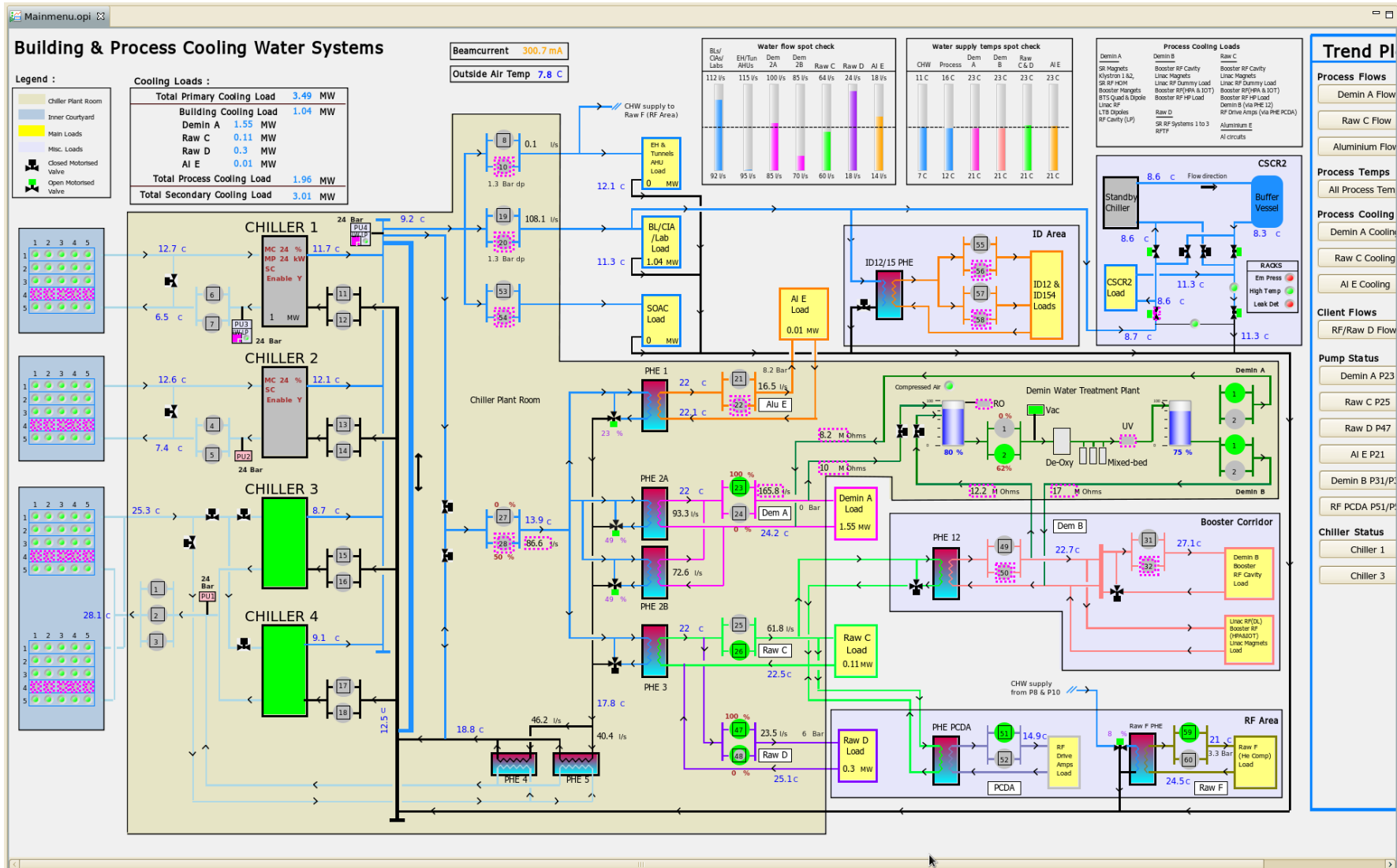
- Hardware Configuration (Left):** A list of hardware components and their associated consoles. Components include BL14I-VA-IOC-01 to 04 (Vacuum for Optics Hutch), BL14I-MO-IOC-01 to 10 (Motion for BL14I-MO-STEP), and BL14J-MO-IOC-01 to 02 (Motion for BL14J-MO-STEP). Each component has a status icon and an 'Autosave' button.
- Motor Positions (Middle):** A table showing the current positions of various motors. The table has two columns: 'Names' and 'Positions'.

Names	Positions
12.5um diamond	-7.50
200um graphite	-24.50
500um graphite	-41.50
EMPTY	-58.50
200um graphite	-75.50
100um graphite	-92.50
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
- Valve Control (Right):** A panel for controlling the BL14I-VA-VALVE-01. It shows the valve is 'Closed' and 'Operational'. The 'Run likes OK' status is '19'. The 'De-bounce' time is '0.0 s' and '10.0'. There are 'Open' and 'Close' buttons.
- Synoptic Diagram (Bottom):** A diagram showing the layout of the beamline components. It includes a sequence of components: A1, S1, D1, GBC1, M1, M2, D2, DCM, OP1, M3, BPM1, D3, GBC2, M4, M5, D4, S2, BPM2, S3, D5, I Branch, OP2, D6, S4, EH2 Nanoprobe, J Branch, S4, ORL, D6, EH1 Mesoprobe. The diagram is color-coded with red and green segments.
- Console (Bottom):** A panel showing the status of various components. It includes buttons for 'OH1 Searched', 'OH2 not searched', 'OH3 not Searched', 'Right to Left', 'Motor Summary', 'Hardware Status', and 'Vacuum Summary'.



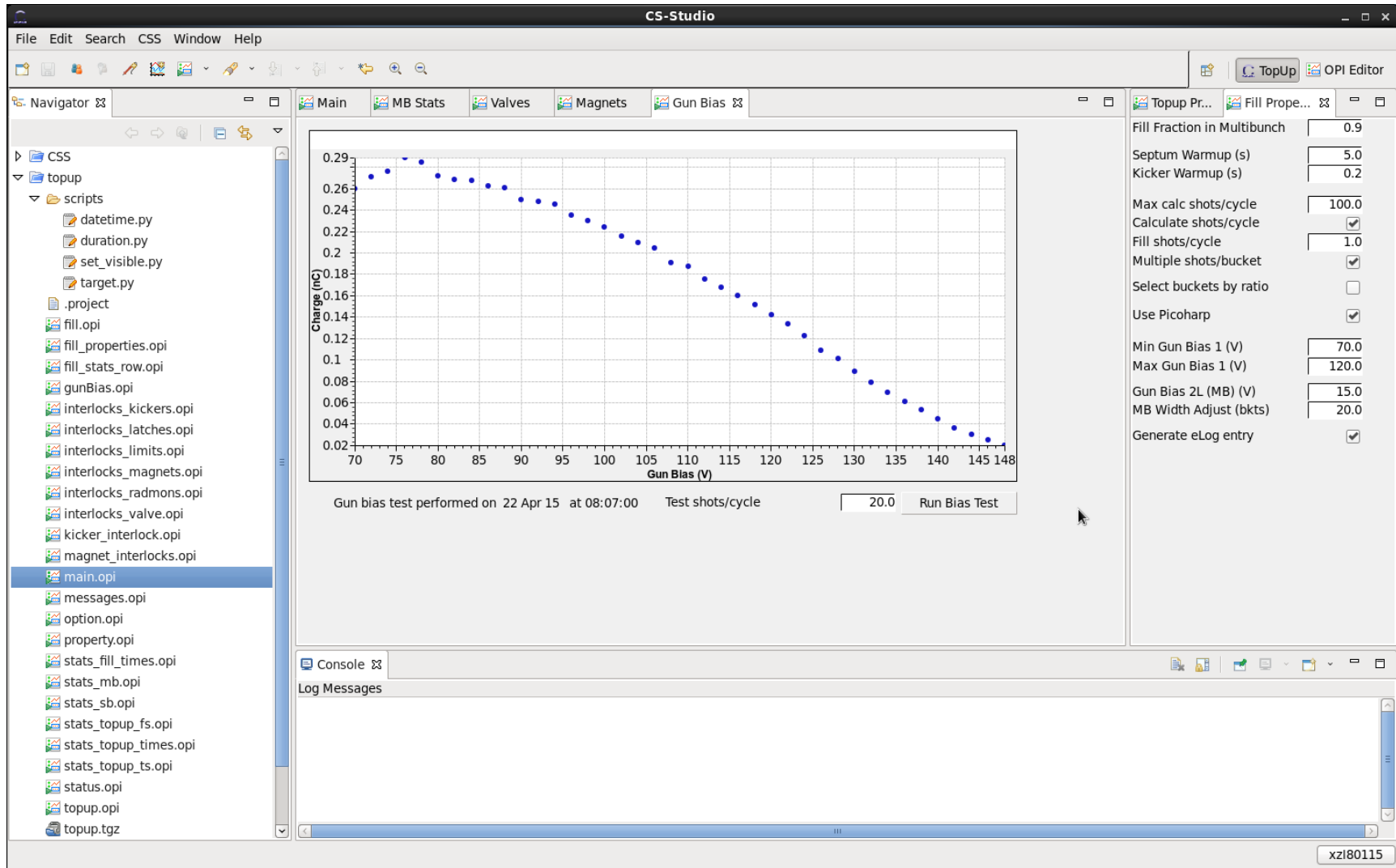
# Work done

- IFM (non-EPICS engineers) love CSS



# Work done

- Converting Python-Qt screens to CSS

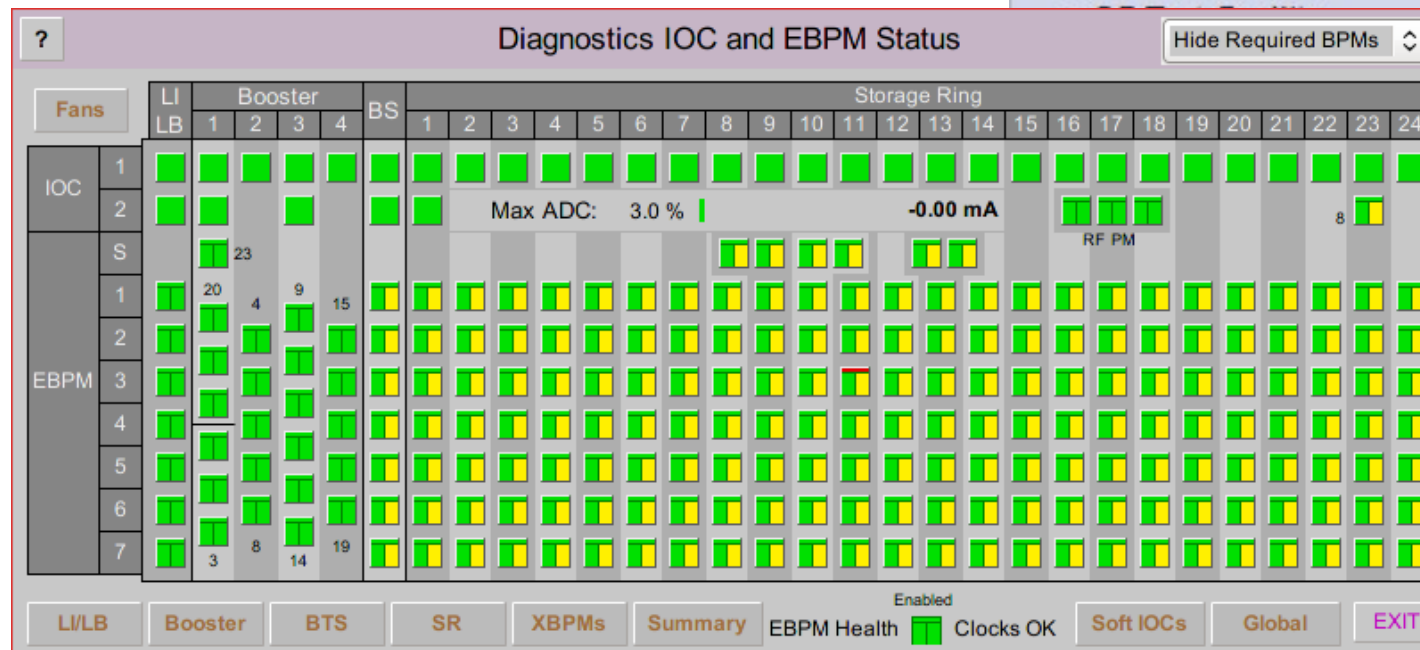
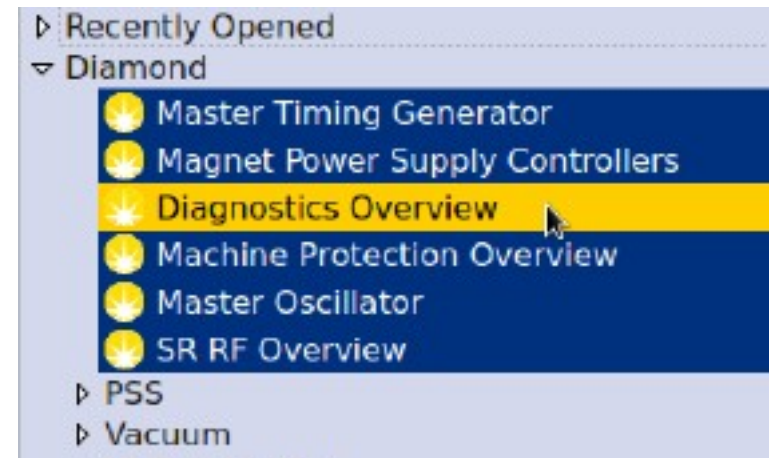


# Decisions

- We need to integrate with the existing DLS release process
- We need a manageable transition (?!?)
- How to:
  - lay out OPI files?
  - handle relative links?
  - launch OPI screens?
  - execute the final conversion?

# Decisions

- Launch EDM-style screens using existing launcher



# Decisions

- Allow BOY and EDM to co-exist
- Convert .opi files alongside .edl files in existing filesystem structure
- Allow developers to choose when to switch from EDM to BOY
- Commit to VCS and edit BOY screens in future

# Work to do

- Repeatable local CS-Studio build
- Publish roll-out plan
- Chase down remaining niggles
- Release versions 4.1 and 4.2 at DLS
- User and developer training

# Thanks!

- Skepticism and questions very welcome...

@wrgrs